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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,810	05/09/2002	Johan E.C. Asplund	543-001-2	2654
4955	7590	12/15/2004	EXAMINER	
WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP BRADFORD GREEN BUILDING 5 755 MAIN STREET, P O BOX 224 MONROE, CT 06468			DANG, HUNG Q	
			ART UNIT	PAPER NUMBER
			2635	
DATE MAILED: 12/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,810

Applicant(s)

ASPLUND, JOHAN E.C.

Examiner

Hung Q Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/9/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-20, 24 and 29-33 is/are rejected.
- 7) ☒ Claim(s) 21-23 and 25-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/20/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17, 19, 20, 24, 29, 30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staats U.S. Patent 6,714,000 in view of Hunt U.S. Patent 5,467,011.

Regarding claims 17 and 20, Staats teaches a method of measuring electrical power (abstract) conducted through at least one electrical conductor, comprising the following steps:

- sensing an electromagnetic field around said at least one electrical conductor at a measuring position (column 3 lines 52-55);
- deriving current flowing through said at least one electrical conductor from said sensed electromagnetic field (column 7, lines 10-17);
- storing instantaneous values for said current in an electronic memory means (column 7 lines 17-20).
- Transmitting digital information to a transceiver provided at a distance from said measuring condition, said digital information being representative of said instantaneous values (column 7, lines 17-39).

However, Staats does not specifically teach that said digital information is transmitted on said at least one electrical conductor to a transceiver provided at distance from said measuring position.

Hunt teaches a system wherein information is transmitted to a remote location over an electrical conductor (column 3 line 63 to column 4 line 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide transmitting the information regarding the measured values disclosed by Staats over an electrical conductor, as evidenced by Hunt, in order to transmit measured data to a remote location.

Regarding claims 19 and 29, Staats also teaches sensing electromagnetic field being affected by means of an electrically conductive coil arranged around the at least one electrical conductor.

Regarding claim 24, even though Staats in view of Hunt does not specifically mention installing a fuse to their electrical system, however, one of ordinary skill in the art would recognize that most of electrical systems are employed with fuses to prevent damages to the systems in case of short circuits happens.

Regarding claim 30, neither the specification nor the claim indicates the criticality of the number of turns of said coil to be 500 turns. One of ordinary skill in the art would recognize that such inductive coil need to have a certain number of turn in order to effectively function and 500-turn coil can be derived by a skilled practitioner in the art through routine experimentation.

Therefore, it would have been obvious to a skilled practitioner to provide 500 turns to the coil disclosed by Staats through routine experimentation to sense the electromagnetic field on said conductor.

Regarding claim 32, neither the specification nor the claim indicates the criticality of having the rate of 1000 samples/second of the current flowing through said conductor. One of ordinary skill in the art would recognize that such current flow rate can be achieved by a skilled practitioner in the art through routine experimentation in order to achieve desired result. Therefore, it would have been obvious to one skilled practitioner to achieve such rate of current flowing through routine experimentation.

Claim 33 is rejected for the same reasons as claim 17. Staats also teaches an electrical power network and a computer (Figure 3, unit 16) connected to said power network.

3. Claims 18 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staats U.S. Patent 6,714,000 in view of Hunt U.S. Patent 5,467,011 in view of Harman U.S. Patent 5,448,222.

Regarding claims 18 and 31, Staats in view of Hunt teaches a method of measuring electrical power as claimed in claim 17. However, Staats in view of Hunt does not teach transmitting data by means of frequency shift keying.

Harman teaches a measuring and transmitting system, which employs frequency shift keying for transmission (column 16, lines 61-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide frequency shift keying for data transmission to the system disclosed by Staats in view of Hunt, as evidenced by Harman, in order to transmit data to a remote location.

Allowable Subject Matter

4. Claims 21-23 and 25-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 21, the prior arts of record fail to teach or disclose an electrical power meter as claimed in claim 20, which further comprises at least one first connector connectable to said at least one electrical conductor; at least one second connector connectable to an electric load; and a switch arranged to interconnect said at least one first and second connectors in normal operation and when commanded, to disconnect said at least one first connector from said at least one second connector.

Regarding claim 25, the prior arts of record fail to teach or disclose an electrical power meter as claimed in claim 20, which further comprises a first module including a first connector connectable to said at least one electrical conductor, and a second connector connectable to an electric load and to said first connector, and two second

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modules, each of said second modules including a first connector connectable to said at least one electrical conductor, and a second connector connectable to an electric load and to said first connector; and wherein each of said second modules is electrically connectable to said first module by interconnecting means arranged to be permanently attached to said first and second modules.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q Dang whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HD

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000

